

REMARKS

The following remarks are responsive to the Final Office Action of November 24, 2009.

At the time of the Office Action, claims 2–9 and 17–23 were pending. The status of the claims is as follows:

- **Claims 3, 9, and 17–23** stand rejected under **35 U.S.C. § 102(b)** as being anticipated by **Sekine**, et al. (U.S. Patent Publication No. 2002/0164037);
- **Claim 2** stands rejected under **35 U.S.C. § 103(a)** as being obvious over **Sekine**;
- **Claims 4 and 5** stand rejected under **35 U.S.C. § 103(a)** as being obvious over **Sekine** in view of **Tamura** (U.S. Patent No. 6,184,455);
- **Claims 6–8** stand rejected under **35 U.S.C. § 103(a)** as being obvious over **Sekine** in view of **Chen** (U.S. Patent No. 6,990,205);

Applicants respectfully request reconsideration in light of the following arguments.

35 U.S.C. § 102(b) Anticipation of Claims 3, 9, and 17–23 by Sekine

1. Sekine fails to teach or suggest receiving by a receiver of the device a command for synthesizing and spatializing a sound. Sekine only teaches a spatialization of a sound that is already synthesized.

In the Office Action, on pp. 4–5, the Examiner rejected claims 3, 9, and 17–23 as being anticipated by Sekine.

The Examiner stated, in relevant part (p. 4):

Sekine disclose[s]... a method for operating a device for generating a synthesized and spatialized acoustic signal comprising:

receiving by a receiver of the device a command for synthesizing and spatializing a sound associated to a virtual source being disposed at a given position relative to a predetermined origin (fig. 1 (2, 5); fig. 3 (16L, 16R); par [0027, 0031, 0046, 0051, 0066] / having the virtual sound image relative to a predetermined origin as being the headphone of the listener) and the sound not being received by the device...

Applicants respectfully disagree with this characterization of the teaching of Sekine.

Sekine discloses a headphone system that receives a sound signal generated by a musical instrument and that outputs to the user of the headphone an audio signal that represents the musical instrument localized in a given virtual position. Paragraph [0001] of Sekine states:

The present invention relates to sound image localization apparatus and methods for localizing, at a predetermined position, a sound image of a tone output from an electronic musical instrument or audio equipment.

As can be seen in the figures—Figure 1: musical instrument 1, sound image localization section 2, and headphone 3, and Figure 2a: headphone 3, screen 8 and virtual sound generating position 9).

In order to output the spatialized sound, the system disclosed by Sekine teaches the use of particular FIR filters (see paragraphs [0028], [0048], [0049]). Sekine discloses receiving the sound signal generated by the musical instrument and then implementing particular processing in order to spatialize the sound signal. Paragraph [0041] states:

Analog tone signal input from the electronic musical instrument 1 is first converted via the A/D converter 10 into a digital signal. However, in a case where the electronic musical instrument 1 is a digital musical instrument that outputs each tone signal in digital form, the A/D converter 10 may be dispensed with so that each tone signal from the electronic musical instrument 1 is directly input to the delay line 11.

The second embodiment disclosed by Sekine is of the same type as the system described above. Sekine states, in paragraph [0081] that the system has a communication interface 58 connectable to a musical instrument or any other audio equipment in order to output a spatialized audio signal (see paragraph [0078], “The tone generator circuit 59 generates tone signals in accordance with supplied MIDI signals...”).

Thus, it is clear that Sekine deals with spatialization of an audio signal *that is already synthesized*. Sekine does not disclose the element of receiving by a receiver a command for synthesizing the sound and spatializing the sound. The sound to be spatialized is created prior to being received by the device and the synthesized sound is received from a separate musical instrument. Therefore, there is no “command” that is directed to a receiver or device that does both. Compared to the previously cited Bruno reference, Sekine only teaches taking into account

a movement of the headphone relative to the virtual source. However, this is not any more relevant to the claim 17 command element.

Lacking a teaching of this claimed element, Sekine cannot be said to anticipate claim 17.

Furthermore, by controlling both the synthesizing and spatializing, a great deal of flexibility is provided that is advantageous over the prior art. Systems that deal with synthesis of an audio signal apart from the spatialization have clearly been disclaimed from the scope of the claims.

Since all of the independent claims in the application comprise a similar limitation, they are not anticipated by Sekine for the reasons given above. Dependent claims 3, 9, and 20 are similarly not anticipated for the reasons given above.

For these reasons, and based on the newly provided independent claims, Applicants assert that the claim language clearly distinguishes over the prior art, and respectfully request that the Examiner withdraw this 35 U.S.C. § 102 rejection from the present application.

35 U.S.C. § 103(a) Obviousness of Claims 2 and 4–8 over Sekine in view of Some Combination of Tamura and Chen

2. Claim 2 is not obvious over Sekine because it does not teach or suggest receiving by a receiver of the device a command for synthesizing and spatializing a sound. Sekine only teaches a spatialization of a sound that is already synthesized.

In the Office Action, on p. 11, the Examiner rejected claim 2 as being obvious over Sekin.

Without addressing the Examiner's arguments on the merits related to the limitations of claim 2, Applicants respectfully assert that, as argued above, Sekine lacks a teaching of providing a command to a device for both synthesizing and spatializing a sound. Providing a device that can receive a command for doing both is fundamentally different than one that is fed a pre-existing synthesized sound and then subsequently deals with spatialization alone. This distinction and the attendant advantages of the presently claimed are discussed in the published application at [0051] – [0061].

3. Applicants rely upon the above arguments with respect to the remaining dependent claims, and assert that none of the additional references supplants the deficiencies identified above with respect to Sekine.

In the Office Action, on pp. 11–14, the Examiner combined Sekine with Tamura and Chen in establishing an obviating combination of references for various dependent claims in the present application. Without addressing the specifics of the additional references on the merits, Applicants rely upon the above arguments and assert that the disclosures of each of these additional references, alone or in combination, does not serve to solve the deficiencies of Sekine. The Examiner has cited these references for purposes related to the specifics of the dependent claims.

For these reasons, Applicant asserts that the claim language clearly distinguishes over the prior art, and respectfully request that the Examiner withdraw the 35 U.S.C. § 103 rejections from the present application.

Conclusion

The application is considered in good and proper form for allowance, and the Examiner is respectfully requested to pass this application to issue. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,

/brian c. rupp/

Brian C. Rupp, Reg. No. 35,665
Mark Bergner, Reg. No. 45,877
DRINKER BIDDLE & REATH LLP
191 N. Wacker Drive, Suite 3700
Chicago, Illinois 60606-1698
(312) 569-1000 (telephone)
(312) 569-3000 (facsimile)
Customer No.: 08968

Date: January 25, 2010